

Work Order ID 142487

142487

Page 1

Wednesday, March 09, 2016 2:54:23 PM

Item ID: 646.9710

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Body

Start Date: 4/21/2016 Start Qty: 15.00

15

Cust Item ID:

Required Date: 5/3/2016 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals:

Process Plan: MCS

Date: **MAR 10 2016**

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr	DAS
646.9700	C (ECN) <u>22</u>	10 9-89

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 7.425"

15

0

DAS
20
9-89

16-05-17

110

0.01

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.15

HAAS CNC vertical machine #1

1-Machine per folio FB130

DWG REV: 0

FOLIO REV: AA

15

1

DAS
20
9-89
DAS
44
9-89

16-05-19

16-05-20

2- deburr and break all sharp edges

DQA:

Date:

16-06-23



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

16/06/10

Work Order update only

Work Order: <u>142487</u> Part No. <u>646-9710</u> NCR No. <u>16-5831</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☒ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐			
Date: <u>16-05-19</u>		Step #: <u>110</u>		QTY Effective: <u>1</u>		MRB (QSI042) Approval DAS 9 9-89 <u>16-05-19</u>	
Description Work Order Deviation				Disposition		Completed By DAS 20 9-89 <u>16-05-19</u>	
Facemill put chatter marks on the part.				Scrap & Replace <u>B127481</u>		Lead hand / Supervisor Approval Verification <u>16/05/19</u>	
Root Cause Environment ☐ No Re-verification ☐ Design ☒ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Mislabeled ☒ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐			
OTHER :							

Work Order ID 142487

Wednesday, March 09, 2016 2:54:23 PM

142487

Page 2

Item ID: 646.9710

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Body

Start Date: 4/21/2016 Start Qty: 15.00

15

Cust Item ID:

Required Date: 5/3/2016 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00				15	1		DAS 20 9-89 16-05-19
120									
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00				15	0		DAS 14 9-89 16/05/25
130									
QC	Memo	0.00							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00				15			DAS 13 9-89 MAY 27 2016
140									
Outsource4	Memo	45.00							
Outsource process - Anodize	Issue P/O to ATG : <u>32503</u>								
	1- Black Anodize as per Dwg 646.9700								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Comformity is required								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Work Order ID 142487

Wednesday, March 09, 2016 2:54:23 PM

142487

Page 3

Item ID: 646.9710 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Body
 Start Date: 4/21/2016 Start Qty: 15.00 ***15*** Cust Item ID:
 Required Date: 5/3/2016 Req'd Qty: 15.00 ***15*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location <u>CK011</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								

15x SP16-6-2

15

DAS
38
9-89

JUN 06 2016

15

JUN 06 2016

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 142487***142487***

Page 4

Wednesday, March 09, 2016 2:54:23 PM

Item ID: 646.9710

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Body

Start Date: 4/21/2016 Start Qty: 15.00

15

Cust Item ID:

Required Date: 5/3/2016 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

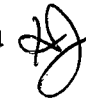
190

QC

Memo

0.02

Quality Control

16/6/7 ~~MCS JUN 07 2016~~

MCS

JUN 07 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

Picklist Print

Wednesday, March 09, 2016 2:54:22 PM

Page 1

Work Order ID: 142487

142487

Parent Item: 646.9710

646.9710

Parent Item Name: Body

Start Date: 4/21/2016

Required Date: 5/3/2016

Start Qty: 15.00

Required Qty: 15.00

Comments: IPP REV:A NEW ISSUE 12/10/04 JFS VERIFY BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B5.000X1.000

Purchased

No

100

f

25.4972

0.62

9.789474

DAS

M7075T6B5 000X1 000

10.000'

20

9-03

16-05-17

7075-T6 BAR 5.000" X 1.000"

Location

Loc Qty

Loc Code

MAT005

25.4972

M127481

20.9772

M134164

4.52

~~6.786~~ 6.786' + .6375'
~~3.214~~ 3.214'

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

DART AEROSPACE LTD		Work Order: 142487
Description: Body		Part Number: 646.9710
Inspection Dwg: 646.9700	Rev: C <i>1/2</i> <i>16.06.08</i>	Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.13 x 45°	+/-0.010 x 0.5°	.130	✓	-	SLIO	
1.500	+/-0.005	1.499	✓	✓	"	
0.352	+0.005/-0.000	.353	✓	-	"	
0.10 x 45°	+/-0.010 x 0.5°	.0985	✓	-	"	
0.875	+/-0.005	.880	✓	✓	"	
0.700	+/-0.005	.698	✓	✓	"	
5.500	+/-0.005	5.500	✓	-	"	
0.660	+/-0.005	.657	✓	-	Height gauge	
0.660	+/-0.005	.659	✓	-		
0.278	+/-0.002	.277	✓	-	↓	
0.339	+/-0.002	.3375	✓	-		
0.352	+/-0.002	.3505	✓	-		
0.372	+/-0.002	.371	✓	-		
1.067	+/-0.002	1.066	✓	-		
2.608	+/-0.002	2.6065	✓	-		
2.750	+/-0.002	2.748	✓	-		
2.892	+/-0.002	2.890	✓	-		
3.348	+/-0.002	3.346	✓	-		
3.597	+/-0.002	3.5955	✓	-		
3.847	+/-0.002	3.8455	✓	-		
0.351	+/-0.002	.3515	✓	✓		
0.544	+/-0.002	.5435	✓	-		
2.195	+/-0.002	2.1955	✓	-		
2.304	+/-0.002	2.303	✓	✓		
2.451	+/-0.002	2.452	✓	-		
2.639	+/-0.002	2.638	✓	-		
3.395	+/-0.002	3.3955	✓	-		
3.495	+/-0.002	3.494	✓	-		
4.551	+/-0.002	4.5505	✓	-		
4.595	+/-0.002	4.595	✓	-		
4.687	+/-0.002	4.6855	✓	-		
4.734	+/-0.002	4.7325	✓	-		
6.651	+/-0.002	6.6495	✓	-		

DART AEROSPACE LTD		Work Order:	142487
Description: Body		Part Number:	646.9710
Inspection Dwg: 646.9700 Rev: C		Page 2 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.201	+0.005/-0.001	0.203	✓	—	gauge	PIN
Ø0.177	+0.005/-0.001	0.178	✓	—	"	
7.026	+/-0.005	7.024	✓	—	Height gauge	
4.245	+/-0.005	4.243	✓	—	"	

Measured by:	20 9-82	Audited by:	14 9-82	Preliminary Approval:	
Date:	16-05-18	Date:	16/05/25	Date:	

Rev	Date	Change	Revised by	Approved
A	13.06.03	New Issue	KJ	
B	13.07.18	Dwg Rev updated	KJ	
C	14.01.21	Dwg Rev updated	KJ	

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REVISIONS				
REV.	DESCRIPTION	DATE	APPROVED	
	LAST PROJECT REVISION: P92		N/C	
INC	INITIAL RELEASE	03/29/09	P. BRANVO	
A	INCORPORATED ECH 02744, 03080, 03912	06/04/13	P. BRANVO	
B	INCORPORATED ECH 03967	07/03/13	P. BRANVO	
C	INCORPORATED ECH 07640/9	08/09/13	P. BRANVO	
D	INCORPORATED ECH 05324	02/26/16	P. BRANVO	

NOTES:

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
2. FINISH IAW MPP-172 SECTION 3.3 & 4.3.
3. MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
4. FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
7. APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
8. CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
9. ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

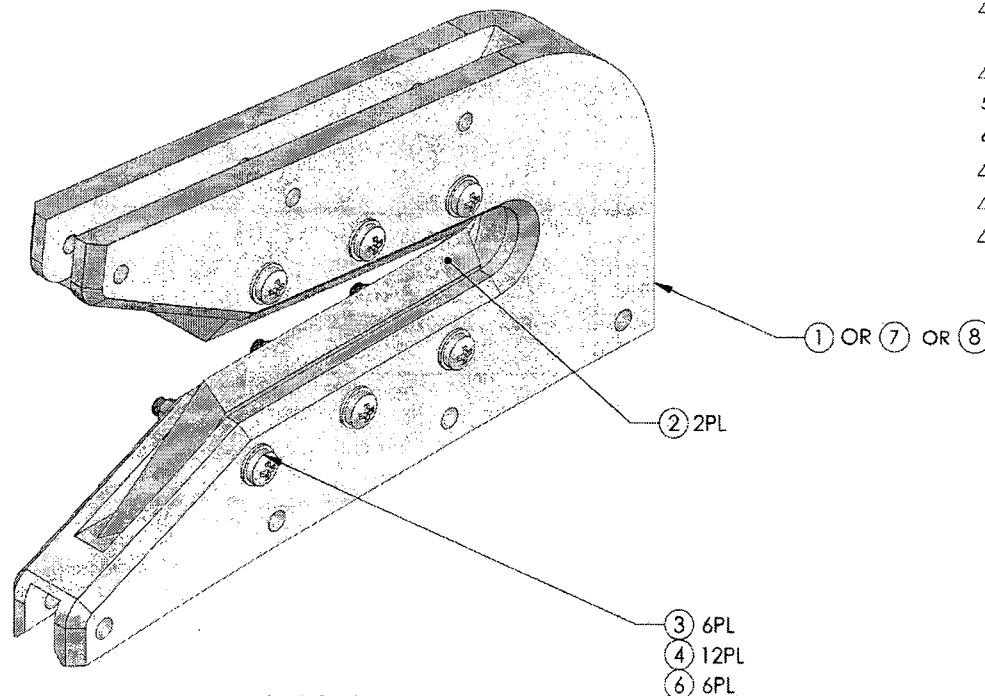
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO. 142487 MC5

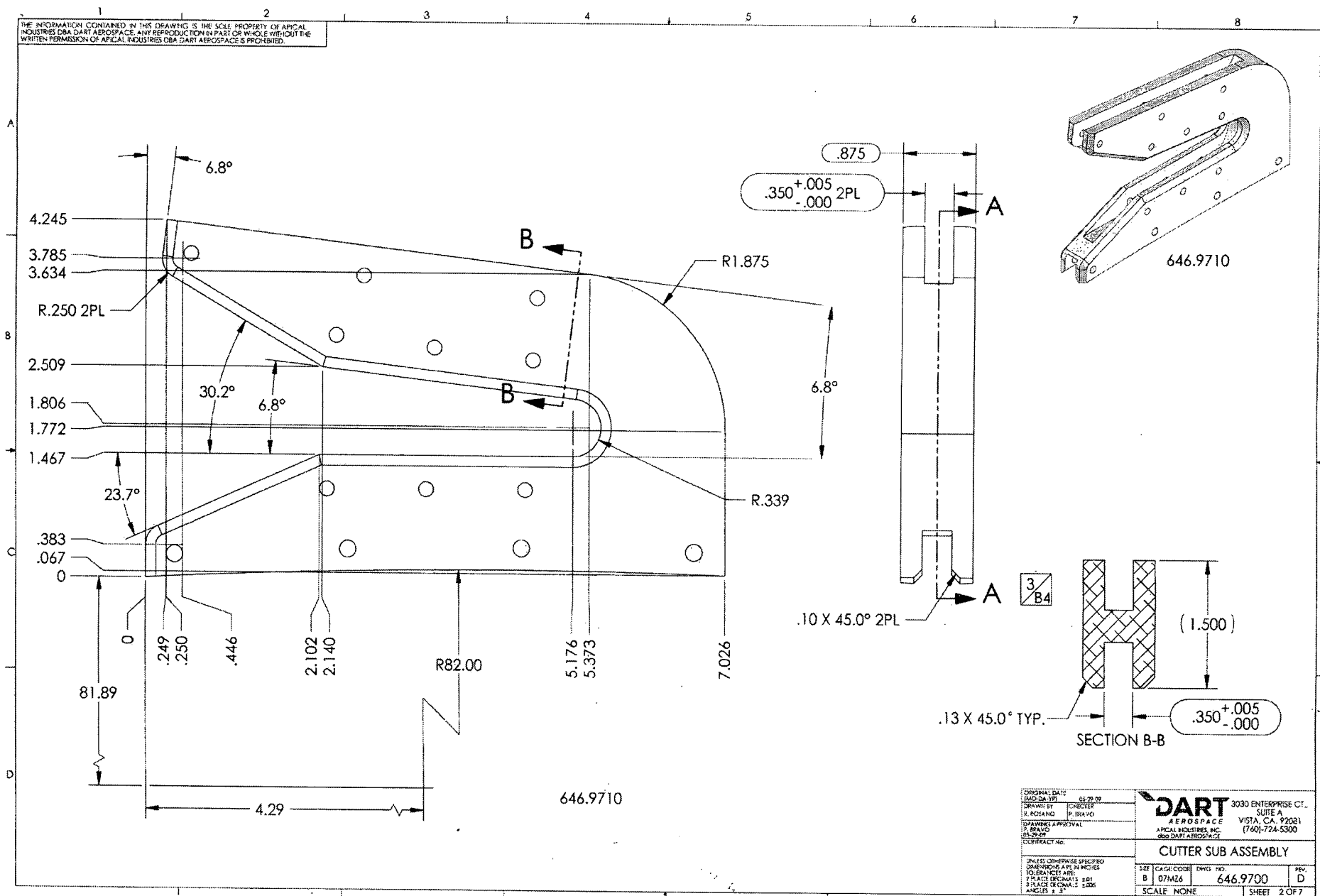
1603+10



646.9701 SHOWN
646.9702 & 646.9703 TYP

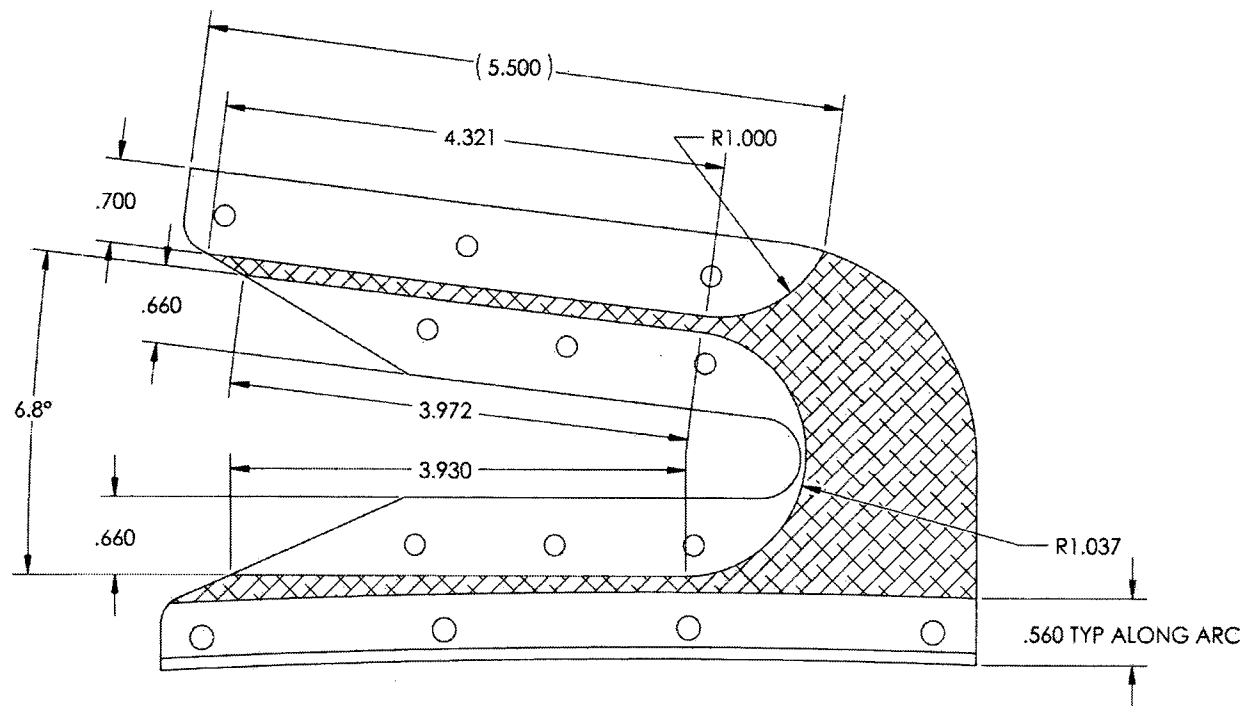
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1 2 3 4 5 6 7 8

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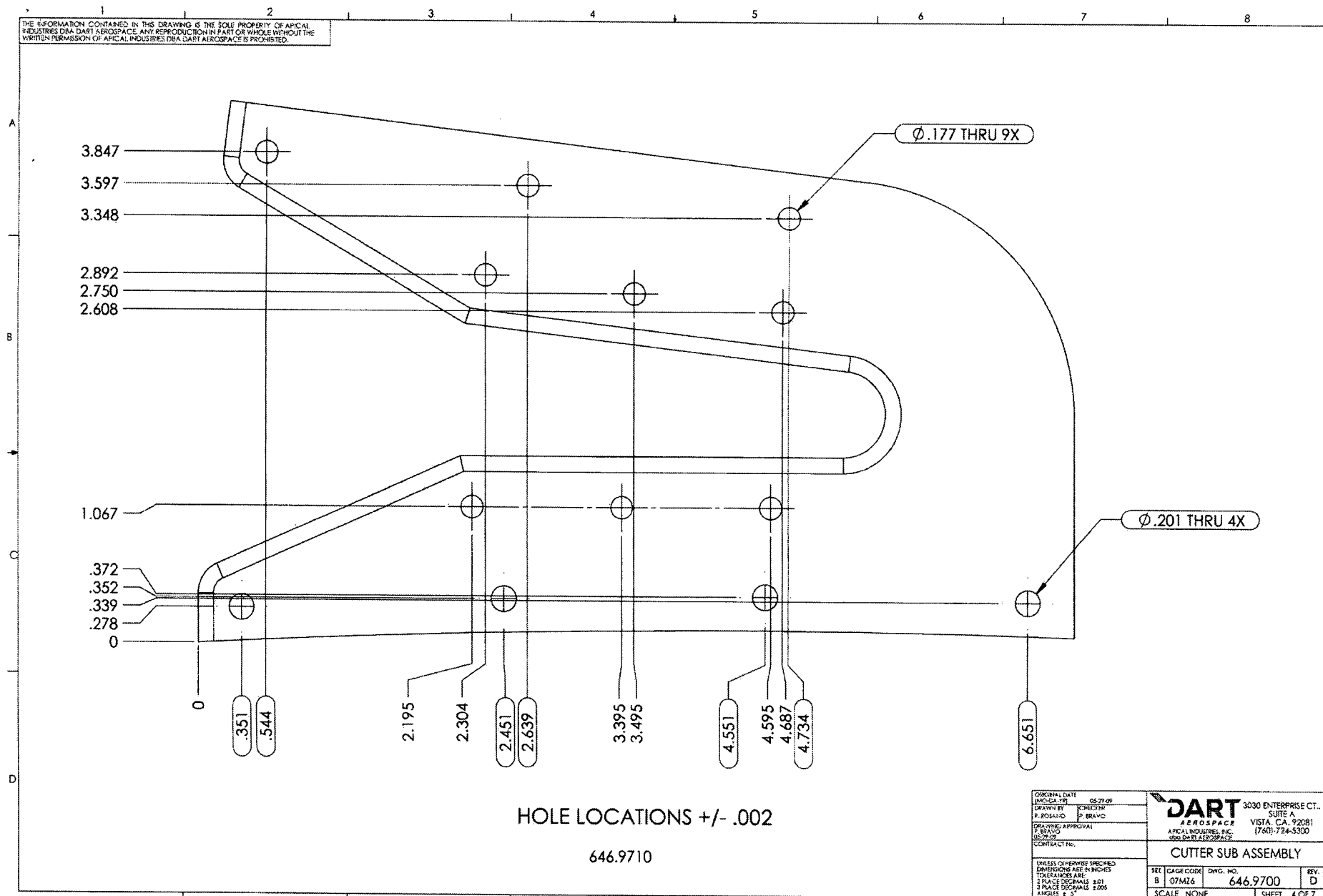


SECTION A-A $\frac{2}{C6}$

646.9710

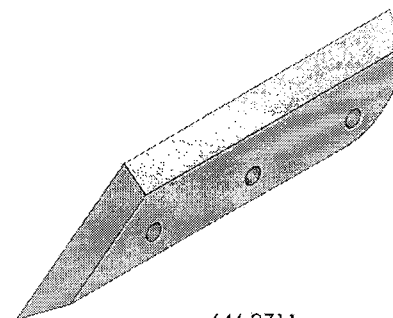
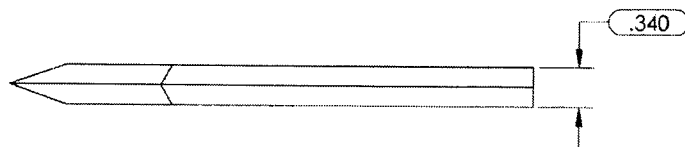
ORIGINAL DATE 05-20-79		3030 ENTERPRISE CT., SUITE A	
DRAWN BY J. B. BROWN		VISTA, CA. 92081	
CHECKED BY J. B. BROWN		(760)-724-5300	
DESIGNING APPROVAL J. B. BROWN		AFICAL INDUSTRIES INC. DDA DART AEROSPACE	
CONTRACT NO.		CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°			
SHEET B	DWG CODE 07M16	DWG NO. 646.9700	REV. D
SCALE NONE		SHEET 3 OF 7	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

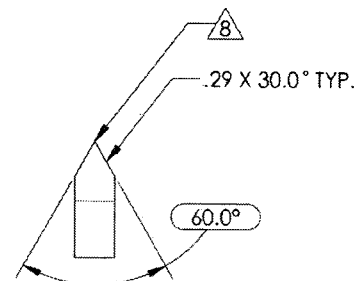
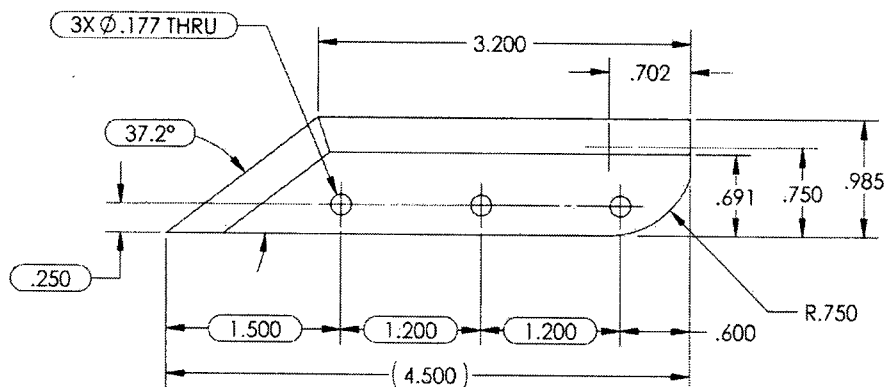


ORIGINAL DATE 05-27-05	DART 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE		
DRAWN BY J. ROSARIO	CHECKED BY J. BRAVO	CONTRACT NO. 646.9700	
DRAWING APPROVAL J. BRAVO USCMC		CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS .001 2 PLACE DECIMALS .005 ANGLES .5°		REV. NO. B 07M26 646.9700 SCALE NONE	REV. NO. D SHEET 4 OF 7

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



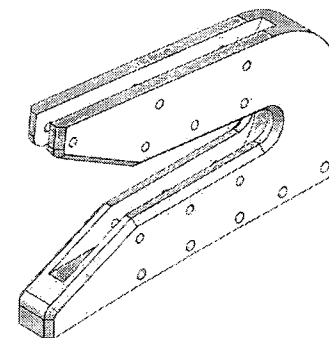
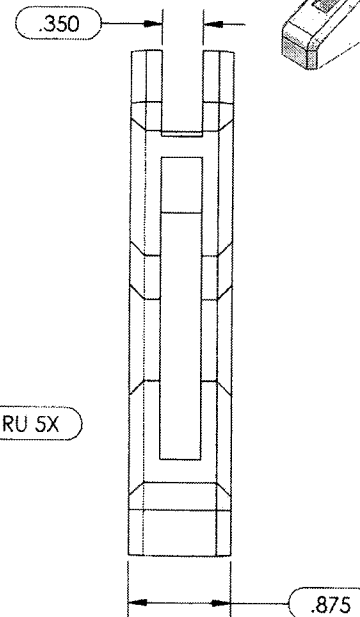
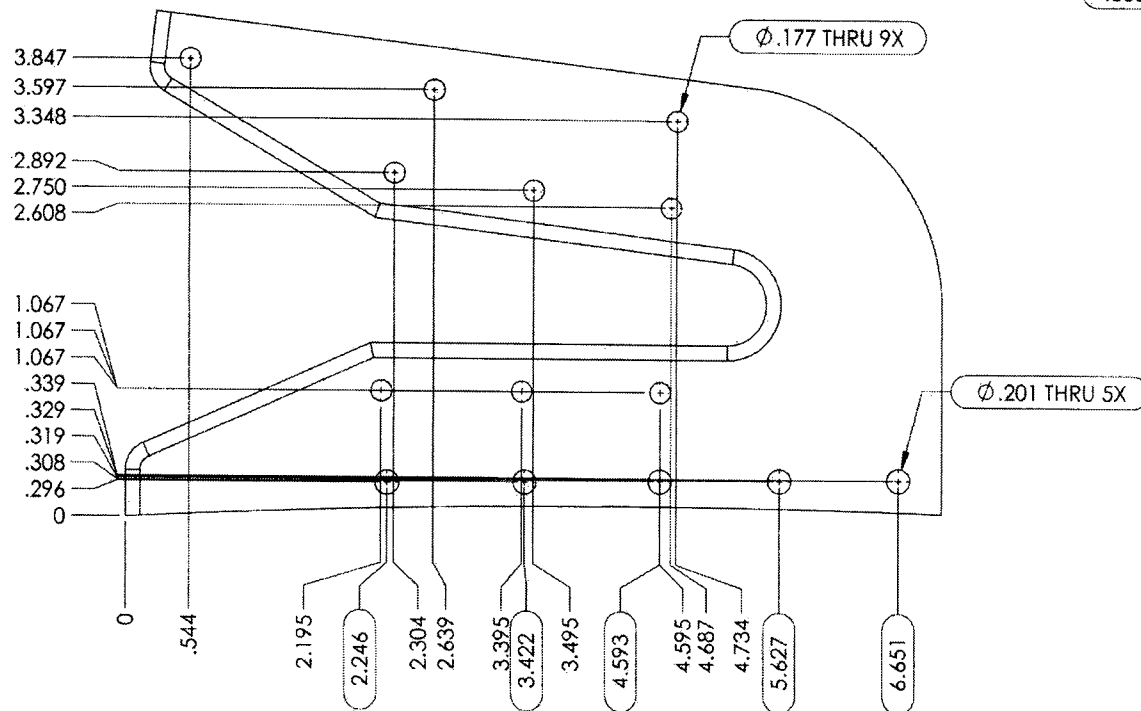
646.9711



646.9711

ORIGINAL DATE 05/29/07		DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300	
DRAWN BY J. KOSARNO		CHECKED BY J. BRANNO	
DRAWING APPROVAL J. BRANNO 05/29/07		APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
CUTTER SUB ASSEMBLY			
SIZE B	CAGE CODE 07M26	DWG. NO. 646.9700	REV. D
SCALE NONE		SHEET 5 OF 7	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

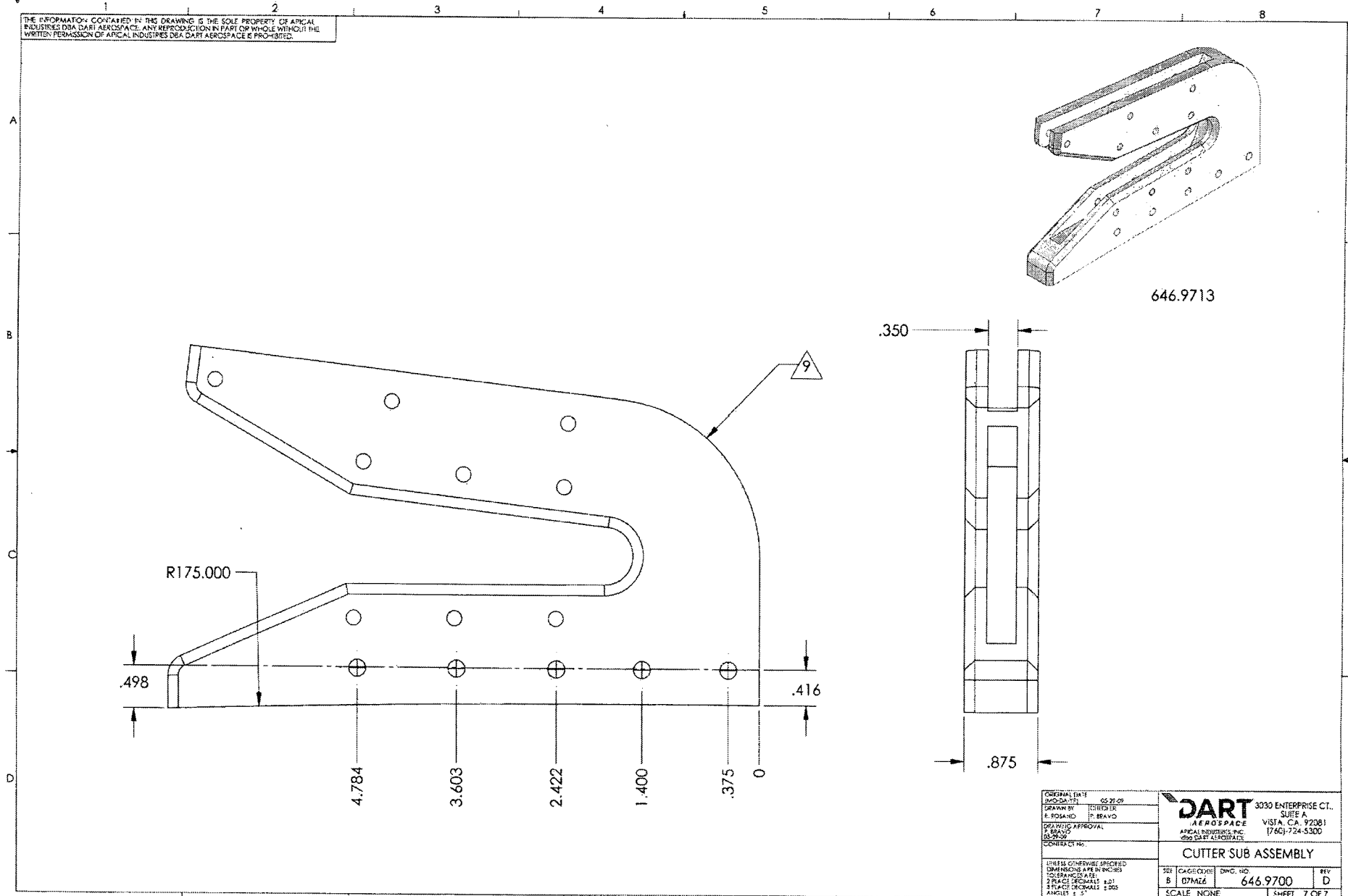


646.9712 $\triangle 9$

646.9712

ORIGINAL DATE 05-29-00	DATE 05-29-00	DART AEROSPACE		3030 ENTERPRISE CT., SUITE A, VISTA, CA. 92081 (760) 724-5300
DRAWN BY R. ROBAVO	CHECKED P. BRAVO	APICAL INDUSTRIES, INC. (DBA DART AEROSPACE)		
DESIGNED BY P. BRAVO	APPROVED 05-29-00	CUTTER SUB ASSEMBLY		
CONTRACT NO.		SIZE B	CAGE CODE 07M26	UNGS. NO. 646.9700
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS 3 PLACE DECIMALS .003 ANGLES .1°		SCALE NONE		REV. D
		SHEET 6 OF 7		

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DSA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DSA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE: 05-21-09		3030 ENTERPRISE CT., SUITE A	
DRAWN BY: J. ROSSANO		VISTA, CA. 92081	
CHECKED BY: P. BRAVO		(760) 724-5300	
DRAWING APPROVAL: P. BRAVO		APICAL INDUSTRIES, INC.	
DATE: 05-21-09		DART AEROSPACE	
CONTRACT NO.:		CUTTER SUB ASSEMBLY	
1) UNLESS OTHERWISE SPECIFIED	2) DIMENSIONS ARE IN INCHES	3) TOLERANCES	4) FINISH
TO SURFACES ARE:	2) PLACE DECIMALS: .001	3) TOLERANCES: .001	4) FINISH: .001
2) PLACE DECIMALS: .001	3) TOLERANCES: .001	4) FINISH: .001	5) ANGLE: 1:1
SCALE: NONE		SHEET 7 OF 7	

ACE

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER**Purchase Order ID PO32503****Purchase Order Date** 5/27/2016**PO Print Date** 5/31/2016**Page Number** 2 of 3**Order From :**

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name**Vendor Phone**

613-446-4544

Ship To Contact**Ship To Phone****Ship Via:**

VENDOR'S TRUCK

Ship Acct:**Buyer**

Chantal Lavoie

Customer POID**Customer Tax #**

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

3	142633	646.3312 CENTER PLATE REV. N/C	6/2/2016	12.00	\$12.05	\$144.60
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Yes

6/2/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total:**\$144.60**

4 142487

646.9710 BODY REV. C ✓

6/2/2016

Yes

6/2/2016

15.00

\$14.50

\$217.50

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total:**\$217.50**

5 142577

D4977-2 BRACKET REV.
D

6/2/2016

Yes

6/2/2016

4.00

\$8.55

\$34.20

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total:**\$34.20****Note:**

5/31/2016



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 911787

Date: 03-Jun-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
5 ea	Part: D5155-9 CO-PILOT CO-PILOT Job: 19571	PO: 32503	Rev: B Line: 1
10 ea	Part: SUPPORT Job: 19572	PO: 32503	Rev: N/C Line: 2
12 ea	Part: 646.3312 CENTER PLATE Job: 19573	PO: 32503	Rev: N/C Line: 3
15 ea	Part: 646.9710 BODY Job: 19574	PO: 32503	Rev: C Line: 4
4 ea	Part: D4977-2 BRACKET Job: 19575	PO: 32503	Rev: D Line: 5
1 ea	Part: ADMINISTRATION FEE ADMINISTRATION FEE Job: 19576	PO: 32503	Rev: Line: 7
DATE: 3/6/16 CERTIFIED SIGNATURE: RECEIVER SIGNATURE: _____			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 911787

Date: 03-Jun-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
5 ea	Part: D5155-9 CO-PILOT CO-PILOT Job: 19571	Rev: B PO: 32503	Line: 1
10 ea	Part: SUPPORT Job: 19572	Rev: N/C PO: 32503	Line: 2
12 ea	Part: 646.3312 CENTER PLATE Job: 19573	Rev: N/C PO: 32503	Line: 3
15 ea	Part: 646.9710 BODY Job: 19574	Rev: C PO: 32503	Line: 4
4 ea	Part: D4977-2 BRACKET Job: 19575	Rev: D PO: 32503	Line: 5
1 ea	Part: ADMINISTRATION FEE ADMINISTRATION FEE Job: 19576	Rev: PO: 32503	Line: 7
DATE: <u>3/6/16</u>			
CERTIFIED SIGNATURE: <u>[Signature]</u>			
RECEIVER SIGNATURE: <u>Sp 16-6-3</u>			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			